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OHSAS 18001: 2007



ISO 14001: 2004

ISO 9001: 2008

November 18, 2010
VIA UPS

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RE: Heritage-WTI, Inc.
Facility ID: 02-15-02-0233
MACT Subpart EEE
CPT Final Report NOC

Please find enclosed the Comprehensive Performance Test Final Report and Notification of Compliance for Heritage-WTI, Inc. (WTI) as prepared by AECOM Inc. This document contains information on the WTI facility and as well as results from the Comprehensive Performance Test (CPT) conducted in March, April, May, and September of 2010.

As operator of a Hazardous Waste Combustor (HWC), WTI is required to demonstrate compliance with the Maximum Achievable Control Technology (MACT) emission standards set forth in Title 40 of the Code of Federal Regulations Part 63, Subpart EEE (HWC MACT). WTI commenced the MACT CPT on March 29, 2010 and completed the test on September 16, 2010. During this period, WTI was able to demonstrate compliance with all required emissions standards and establish operating parameter limits (OPLs) to ensure future compliance. The results of this testing, the established OPLs, and supporting documentation can be found within the attached Notice of Compliance and CPT Report.

WTI holds the some of the information contained in the CPT Report and NOC as Confidential Business Information (CBI). The specified CBI is identified where applicable within the report. The following report pages contain information that is held as CBI by WTI:

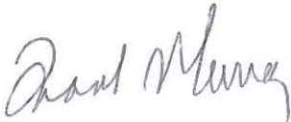
Page 2-5 – Table 2-3
Page 2-7 – Table 2-5
Page 4-2 – Table 4-1
Page 4-3 – Table 4-2
Page 4-4 – Table 4-3
Page 4-9 – Table 4-9
Appendix A – Flue Gas Cleaning System Process Data (Pages A-143 to A-202)

Redacted versions of these pages have been enclosed for public viewing. Please insert these pages when providing this document to the public.

If you have questions concerning the content of this report, please contact Vince Waggle of my staff at 330-386-2182.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are certain penalties for submitting false information including the possibility of fine and imprisonment for knowing violations.

Sincerely,



Frank Murray
Vice President and General Manager

Cc: Pam Korenewych, OEPA-DAPC-NEDO (Cover Letter and CPT/NOC Report)
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Environment

Prepared for:
Heritage-WTI, Inc.
1250 St. George Street
E. Liverpool, Ohio

Prepared by:
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November 18, 2010

Comprehensive Performance Test Final Report and Notification of Compliance for the Rotary Kiln Incinerator

Final Report





Environment

Prepared for:
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November 18, 2010

Comprehensive Performance Test Final Report and Notification of Compliance for the Rotary Kiln Incinerator Final Report



Prepared By: Douglas R. Roeck

Reviewed By: David Moll

Contents

1.0 Statement of Compliance	1-1
2.0 Program Summary and Notification of Compliance	2-1
2.1 Summary of Test Results	2-1
2.2 Notification of Compliance (NOC)	2-2
2.2.1 Facility Information	2-2
2.2.2 Source Information and Applicability	2-3
2.2.3 Emission Standards	2-3
2.2.4 Operating Parameter Limits	2-4
2.2.5 Automatic Waste Feed Cutoff Limits	2-6
2.2.6 HWC Residence Time	2-8
2.2.7 Fugitive Emissions	2-8
2.2.8 Other MACT Operating Requirements	2-9
2.2.9 Certification	2-10
3.0 Introduction and Process Description	3-1
3.1 Introduction and Project Background	3-1
3.2 Facility Overview	3-1
3.3 Process Description	3-1
3.3.1 Overall Waste Treatment System	3-1
3.3.2 Waste Feed Systems	3-2
3.3.3 Air Pollution Control Equipment	3-3
3.4 Process Monitoring	3-3
3.4.1 Continuous Monitoring Systems	3-4
3.4.2 Continuous Emissions Monitoring System	3-4
4.0 Process Operating Conditions	4-1
4.1 Overview of Planned Test Conditions	4-1
4.1.1 Test Condition 1	4-1
4.1.2 Test Condition 2	4-1
4.1.3 Test Condition 2 Retest	4-1
4.2 Facility Monitoring Data	4-2
4.3 Constituent Spiking	4-4
4.4 Metals Feed Limit Extrapolation Strategy	4-7
4.5 Proposed Permit Limits and Operating Parameter Limits	4-8
4.5.1 Parameters Demonstrated by Testing During the CPT	4-10

4.5.2	Parameters Established by Regulatory Requirements	4-13
4.5.3	Parameters Established by Manufacturer's Recommendations and/or Good Operating Practice	4-13
5.0	Feed Stream Sampling and Analysis.....	5-1
5.1	Waste Stream Sampling.....	5-1
5.2	Waste Stream Analytical Results	5-1
6.0	Performance Test Results.....	6-1
6.1	Continuous Emission Monitoring.....	6-2
6.2	PCDDs/PCDFs	6-3
6.3	POHC DRE	6-6
6.4	Particulate Matter	6-8
6.5	Hydrogen Chloride and Chlorine	6-9
6.6	Metals	6-10
7.0	Quality Assurance/Quality Control Documentation	7-1
7.1	Sample Collection QA/QC	7-1
7.1.1	Waste Feed Streams	7-1
7.1.2	Stack Gas.....	7-1
7.2	Laboratory Analysis QA/QC	7-4
7.2.1	Waste Feed Streams	7-4
7.2.2	Stack Gas Analyses.....	7-4
8.0	Continuing Compliance Methods.....	8-1

List of Appendices

Appendix A Facility Process Operating Data

Appendix B CMS / CEMS Performance Evaluation Test Results

Appendix C Triad Chemicals, LLC Spiking Reports

Appendix D Analytical Results for All Waste Feed Streams by WTI's Onsite Laboratory

Appendix E Field Sampling Documentation

Appendix F Analytical Data Reports

Appendix G Sample Calculations

Appendix H Audit Sample Results from OEPA

List of Tables

Table 2-1 Overall Summary of CPT Emission Results	2-2
Table 2-2 Applicable Emission Standards for Hazardous Waste Incinerators	2-3
Table 2-3 MACT OPLs Established Based on Emissions Testing	2-5
Table 2-4 MACT OPLs Established Based on Manufacturer' Recommendations	2-6
Table 2-5 AWFCO Parameters and Operating Limits	2-7
Table 3-1 Continuous Emission Monitoring Instrumentation	3-4
Table 4-1 Process Operating Data Summary – Condition 1	4-2
Table 4-2 Process Operating Data Summary – Condition 2	4-3
Table 4-3 Process Operating Data Summary – Condition 2 Retest.....	4-4
Table 4-4 Constituent Feed Rates for Test Condition 1	4-5
Table 4-5 Constituent Feed Rates for Test Condition 2	4-6
Table 4-6 Constituent Feed Rates for Test Condition 2RT	4-7
Table 4-7 Metal Extrapolation Calculations.....	4-8
Table 4-8 Operating Parameter Limits Established for the Kiln and SCC	4-9
Table 4-9 Operating Parameter Limits Established for the Flue Gas Cleaning System	4-9
Table 4-10 Operating Parameter Limits Established Based on Manufacturer's Recommendations...	4-10

Table 6-1 Sample Train Run Times for Test Conditions 1 and 2	6-1
Table 6-2 Sample Train Run Times for Condition 2RT	6-2
Table 6-3 Gaseous Measurements for Total Hydrocarbons, Carbon Dioxide and Oxygen	6-2
Table 6-4 PCDD/PCDF Emission Results for Condition 1	6-4
Table 6-5 PCDD/PCDF Emission Results for Condition 2	6-5
Table 6-6 PCDD/PCDF Emission Results for Condition 2RT	6-6
Table 6-7 VOST Sampling Parameters for Condition 1	6-7
Table 6-8 DRE Calculations for Monochlorobenzene for Test Condition 1	6-8
Table 6-9 Particulate Emission Results for Condition 2	6-9
Table 6-10 Emission Results for Hydrogen Chloride and Chlorine for Condition 2	6-10
Table 6-11 Emission Results for Metals for Condition 2	6-12
Table 6-12 Emission Results for Mercury for Condition 2RT	6-15
Table 7-1 Overall QC Summary for PCDDs/PCDFs in Stack Gas Samples	7-5
Table 7-2 Overall QC Summary for Volatile Organics in Stack Gas Samples	7-6
Table 7-3 Overall QC Summary for HCl and Cl ₂ in Stack Gas Samples	7-7
Table 7-4 Overall QC Summary for Metals in Stack Gas Samples	7-8

Glossary of Terms and Acronyms

acfm	actual cubic feet per minute
APCS	air pollution control system
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWFCO	automatic waste feed cut-off
Cd	cadmium
CEMS	continuous emission monitoring system
CFR	Code of Federal Regulations
Cl ₂	chlorine (gas)
CMS	continuous monitoring system
CO	carbon monoxide
COA	certificate of analysis
CO ₂	carbon dioxide
COC	chain of custody
CPT	comprehensive performance test
Cr	chromium
CVAAS	cold vapor atomic absorption spectroscopy
DCS/DAS	data control system / data acquisition system
DI	deionized (water)
DOC	documentation of compliance
DOT	Department of Transportation (U.S.)
DRE	destruction and removal efficiency
dscfm	dry standard cubic feet per minute
dscm	dry standard cubic meter
EDL	estimated detection limit
EPA	Environmental Protection Agency (U.S.)
EMPC	estimated maximum possible concentration
FGCS	flue gas cleaning system
FSAP	Feed stream analysis plan
g/hr	grams per hour
g/sec	grams per second
gr/dscf	grains per dry standard cubic foot
GC/MS	gas chromatography/mass spectrometry
HAPs	hazardous air pollutants

HCl	hydrogen chloride (gas) or hydrochloric acid
Hg	mercury
HOCS	hazardous organic constituents
HRA	hourly rolling average
HRB	heat recovery boiler
HRGC/HRMS	high resolution gas chromatography / high resolution mass spectrometry
HWC	hazardous waste combustor
ICAP	inductively coupled argon plasma
ICP-MS	inductively coupled plasma mass spectrometry
ID	induced draft (fan)
IDL	instrument detection limit
in. w.c.	inches water column (pressure)
LCS/LCSD	laboratory control sample/ laboratory control sample duplicate
lb/hr	pounds per hour
LVM	low volatile metals (arsenic, beryllium and chromium)
MACT	maximum achievable control technology
MDL	method detection limit
µg	micrograms
mg	milligrams
mg/kg	milligrams per kilogram
MS/MSD	matrix spike / matrix spike duplicate
ND	non-detect or not detected
NDIR	non-dispersive infrared
NELAC	National Environmental Laboratory Accreditation
NESHAPs	National Emission Standards for Hazardous Air Pollutants
ng	nanograms
NIST	National Institute of Standards and Technology
NOC	Notification of Compliance
NO _x	oxides of nitrogen
OEPA	Ohio Environmental Protection Agency
OMA	one minute average
O&M	operation and maintenance
OPL	operating parameter limit
OTC	operator training and certification
O ₂	oxygen

Pb	lead
PCC	primary combustion chamber
PCDDs	polychlorinated dibenzo-p-dioxins
PCDFs	polychlorinated dibenzofurans
pg	picograms
PET	performance evaluation test
PLC	programmable logic controller
P&ID	process and instrumentation diagram
PM	particulate matter
POHC	principal organic hazardous constituent
ppb(v)	parts per billion (volume basis)
ppm(v)	parts per million (volume basis)
QAO	quality assurance officer
QAPP	quality assurance project plan
QA/QC	quality assurance/quality control
RA	relative accuracy
RAVG	rolling average
RCRA	Resource Conservation and Recovery Act
RKI	rotary kiln incinerator
RL	reporting limit
RPD	relative percent difference
RRF	relative response factor
RSD	relative standard deviation
RDL	reliable detection level
SCC	secondary combustion chamber
scfh	standard cubic feet per hour
scfm	standard cubic feet per minute
S/N	signal-to-noise ratio
SOP	standard operating procedure
SSMP	startup, shutdown and malfunction plan
SVM	semivolatile metals (cadmium and lead)
TEF	toxic equivalency factor
TEQ	toxic equivalencies
THC	total hydrocarbons
VOCs	volatile organic compounds

VOST	volatile organic sampling train
WAP	waste analysis plan
WTI	Waste Technologies Industries, Inc.

1.0 Statement of Compliance

The hazardous waste combustor (HWC) operated at the Heritage-WTI (WTI) facility in E. Liverpool, OH was tested in March, April, May and September 2010 to assess the unit's performance relative to the emissions standards and related requirements set forth in 40 CFR 63 Subpart EEE. This Report documents that WTI's rotary kiln incineration (RKI) system fully complies with these standards.

Project Approvals

Prepared By:



Douglas R. Roeck
AECOM Project Manager

Date:

18-Nov-2010

Approved By:



David Moll
AECOM Technical Reviewer

Date:

11/18/10

2.0 Program Summary and Notification of Compliance

2.1 Summary of Test Results

WTI conducted its Maximum Achievable Control Technology (MACT) Comprehensive Performance Test (CPT) on the RKI system over the following three time periods during 2010:

- March 29-April 2, 2010;
- May 10-14, 2010; and
- September 13-17, 2010

Ultimately, results from the three separate CPT programs demonstrated full compliance with all MACT performance standards and/or performance criteria. The test program was conducted in accordance with an approved MACT CPT Plan and under full oversight of U.S. EPA Region 5 and the Ohio Environmental Protection Agency (OEPA). As described in the Plan, test parameters included regulated emissions and/or performance standards.

An overall summary of emission results and/or performance criteria for all MACT-regulated parameters along with identification of the specific test phase from which the data were used to demonstrate compliance is provided in **Table 2-1**.

Table 2-1 Overall Summary of CPT Emission Results

Regulatory Citation / Emission Parameter	Units	CPT Cond. 1 Mar/Apr-10	CPT Cond. 2 May-10	CPT Cond. 2RT Sep-10	MACT Limit ^(a)
40 CFR 63.1219(a)(1)(i)(A) PCDDs/PCDFs (TEQ Basis)	ng/m ³	0.0040	0.5180	0.0086	0.20
40 CFR 63.1219(a)(2) Mercury	µg/m ³	(b)	290.6	7.04	130
40 CFR 63.1219(a)(3) Semivolatile Metals (Cd & Pb)	µg/m ³	(b)	128.7	(b)	230
40 CFR 63.1219(a)(4) Low Volatile Metals (As, Be & Cr)	µg/m ³	(b)	18.2	(b)	92
40 CFR 63.1219(a)(5)(ii) Total Hydrocarbons	ppm	0.90	1.42	0.20	10
40 CFR 63.1219(a)(6) Hydrogen Chloride & Chlorine	ppm	(b)	1.67	(b)	32
40 CFR 63.1219(a)(7) Particulate Matter	gr/dscf	(b)	0.0024	(b)	0.013
40 CFR 63.1219(c) Destruction/Removal Efficiency	%	99.9999	(b)	(b)	> 99.99

^(a) Final MACT standards for hazardous waste incinerators were published in the Federal Register on October 12, 2005. See 70 FR 59570, Section 63.1219.

^(b) Parameter not measured during this condition.

Note 1: All emission data (except DRE) are corrected to 7% oxygen.

2.2 Notification of Compliance (NOC)

The requirements for a NOC under the HWC MACT rule are outlined under 40 CFR 63.1210(d). As required by the regulations, an NOC is required to be submitted within 90 days of test completion. This CPT report and NOC is being submitted prior to the **December 14, 2010** deadline, as specified by OEPA. The following sections provide the required information.

2.2.1 Facility Information

The WTI incinerator is a rotary kiln incineration system with primary and secondary combustion chambers. This is a commercial hazardous waste incineration facility that treats liquid and solid wastes that are classified as hazardous and also treats process vent streams from operations at the facility as part of the overall air emissions control program. The process is monitored and controlled by a distributed control system (DCS) capable of continuously monitoring the process to assure all operational parameters are within regulatory and permit limits while waste is being fed to the unit. In addition, this incinerator is equipped with a Continuous Emissions Monitoring System (CEMS) that

continuously samples the exhaust gases for oxygen and total hydrocarbons in the stack gas exhaust stream.

The facility ID and mailing address is:

Heritage-WTI, Inc.
1250 St. George St.
East Liverpool, Ohio 43920
U.S. EPA RCRA ID #: OHD 980 613 541
Ohio Title V Permit No. 02-15-02-0233
Ohio Permit to Install No. 02-18743

The primary contact is:

Mr. Frank Murray
VP and General Manager
Phone: (330)-386-2154

2.2.2 Source Information and Applicability

In accordance with the provisions of 40 CFR §63.1201(a), all hazardous waste combustion sources must be treated as if they are major sources under the Title V permitting program.

2.2.3 Emission Standards

The emissions standards that apply to the WTI facility that were evaluated under this program are summarized in **Table 2-2**.

Table 2-2 Applicable Emission Standards for Hazardous Waste Incinerators

Emissions Parameter	Limit	Citation
PCDDs/PCDFs (TEQ basis)	≤ 0.20 ng/dscm	40 CFR 63.1219(a)(1)(i)(A)
Mercury	≤ 130 μ g/dscm	40 CFR 63.1219(a)(2)
Semivolatile Metals (SVM) (Cadmium and Lead)	≤ 230 μ g/dscm	40 CFR 63.1219(a)(3)
Low Volatile Metals (LVM) (Arsenic, Beryllium and Chromium)	≤ 92 μ g/dscm	40 CFR 63.1219(a)(4)
Total Hydrocarbons	≤ 10 ppmv	40 CFR 63.1219(a)(5)(ii)
Hydrogen Chloride & Chlorine	≤ 32 ppmv dry as Cl ⁻	40 CFR 63.1219(a)(6)
Particulate Matter (PM)	≤ 0.013 gr/dscf	40 CFR 63.1219(a)(7)
Destruction and Removal Efficiency (DRE)	$\geq 99.99\%$	40 CFR 63.1219(c)

Note: All emission concentrations are corrected to 7% oxygen

2.2.4 Operating Parameter Limits

Operating parameter limits (OPLs) are established during the CPT to ensure continued compliance with the MACT standards. The specific OPLs that must be set are delineated in the regulations under 40 CFR 63.1209. In light of the failure to demonstrate full compliance with all emission standards based on the original Condition 2 testing conducted in May 2010, WTI issued a letter to EPA Region 5 on June 17, 2010 denoting a revised set of operating parameter limits (OPLs) that would be in place until such time that re-testing could be performed. These revised OPLs were renegotiated and approved by EPA in a letter dated July 16, 2010 and WTI has been operating under these limits until the date of submittal of this NOC.

The final set of MACT OPLs resulting from the three testing events (the original Condition 1 testing in March/April; portions of the original Condition 2 testing in May and successful retesting of Condition 2 in September) is provided in **Tables 2-3 and 2-4**. Table 2-3 summarizes those OPLs established based on testing while Table 2-4 summarizes those OPLs based on equipment manufacturers' recommendations and/or WTI's operating experience. Further discussion on the regulatory requirements associated with these OPLs and the logic pertaining to how these limits have been established is provided later in Section 4.5.